W. Ward,

Nail Extractor.

No 105016. Patented July 5. 1870.

Fig 1

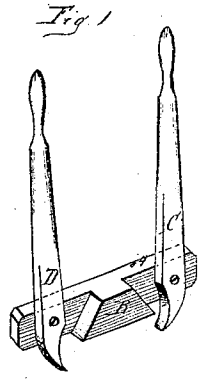
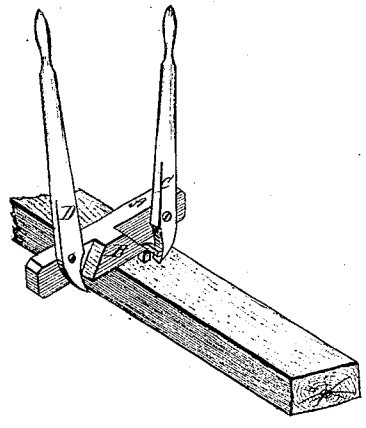


Fig 2.



Witnesses.

C. L. Colby

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United States Patent Office.

WALTER WARD, OF MOUNT HOLLY, NEW JERSEY.

Letters Patent No. 105,016, *dated July* 5, 1870.

IMPROVEMENT IN SPIKE-EXTRACTOR.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WALTER WARD, of Mount Holly, in the county of Burlington and State of New Jersey, have invented a new and useful Improvement in Railroad Spike-Extractors; and I do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the class to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawings which make part of this specification, and in which—

Figure 1 is a perspective view of my improved extractor, and

Figure 2 is a similar view, showing its operation.

Like letters of reference indicate like parts in the several figures.

The nature of my invention consists in connecting two levers by a cross-bar, having a beveled block on its side, in such a manner that, while one lever forms the fulcrum for the other, this other lever, being pivoted on the cross-bar, is made to raise the spike, the beveled block forming a bearing against the side of the spike opposite to the one seized by the free lever.

A, in the drawings, may represent a cross-bar, having formed on the center of one of its sides a beveled block, B, the bevel being upwardly.

To the bar A, on each side of block B, are pivoted levers, C D, their lower ends being rounded inwardly to form them tong-shaped. These levers are so pivoted that their tong ends pass just clear of the lower edges of block B when the levers are depressed.

In figure 2 I have shown the operation of my extractor. The lever C, in this case, seizes firmly against the tie, the block B bearing against one side of the spike, while the lever D, with its tong end, seizes under the spike. As the lever D is depressed it raises the spike, the latter bearing against and passing the edge of the block, which, by reason of its small surface, offers little or no resistance, the lever C serving as a fulcrum for the whole.

In the same manner, lever D may serve as the fulcrum and lever C raise the spike.

The great advantage of my extractor is the great leverage and consequent power attained, united to the action of the tong, the block B, and either of the levers forming a tong.

Spikes which have remained in their place for any length of time, generally are firmly rusted in, from the effects of the weather, and require more than ordinary power to be drawn.

Another advantage is, that the spike is drawn perfectly straight, by reason of its bearing against block B, so that, if not otherwise injured, it may at once be used again.

The operator, in drawing a spike, seizes one lever with each hand, and, after placing one as a fulcrum against the tie, and the other in proper position, depresses both levers. When the lever drawing the spike has been fully depressed without the spike being completely removed, he shifts the lever to its original position, and repeats the operation until the spike is completely removed.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The spike-extractor, consisting of the cross-bar A beveled block B, and levers C D, arranged to operate substantially as and for the purposes set forth.

WALTER WARD.

Witnesses:

PHILIP F. SLACK,

L. W. PRICKITT.